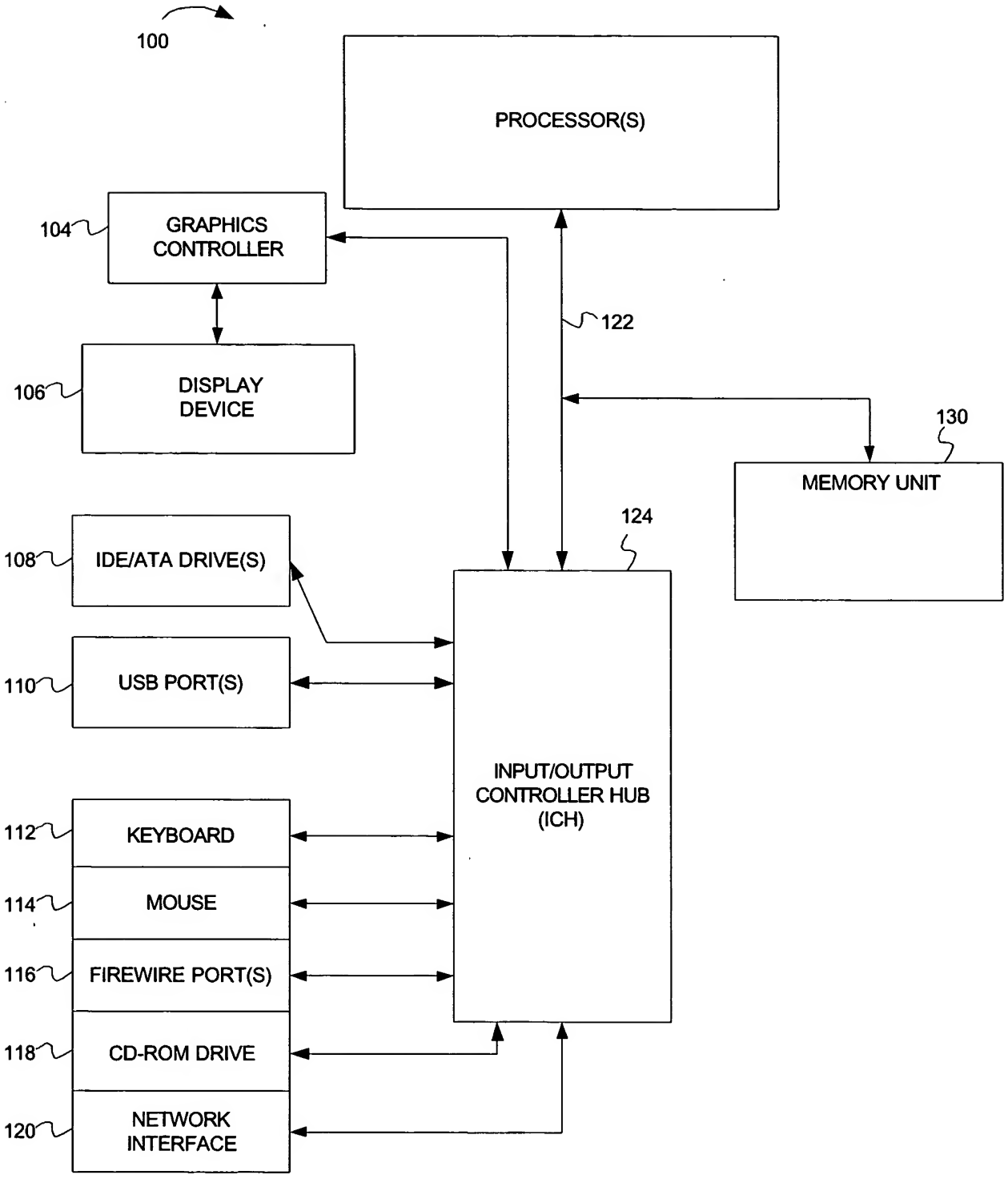
100
PROCESSOR(S)
104
GRAPHICS CONTROLLER
122
106
DISPLAY DEVICE
130
MEMORY UNIT
124
108
IDE/ATA DRIVE(S)
110
USB PORT(S)
INPUT/OUTPUT CONTROLLER HUB (ICH)
112
KEYBOARD
114
MOUSE
116
FIREWIRE PORT(S)
118
CD-ROM DRIVE
120
NETWORK INTERFACE

FIG. 1

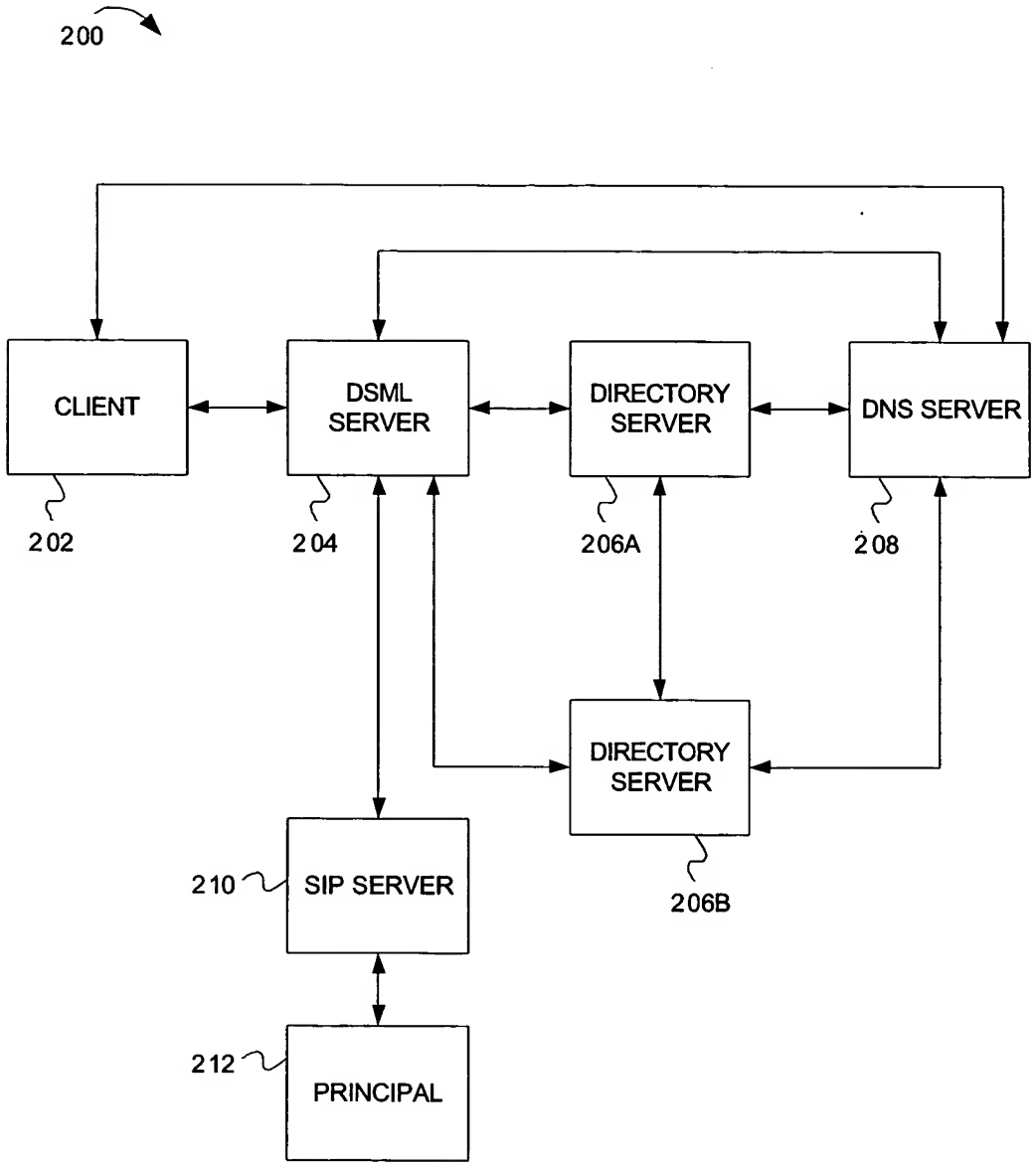
200
CLIENT
DSML SERVER
DIRECTORY SERVER
DNS SERVER
202
204
206A
208
DIRECTORY SERVER
206B
210
SIP SERVER
212
PRINCIPAL

FIG. 2

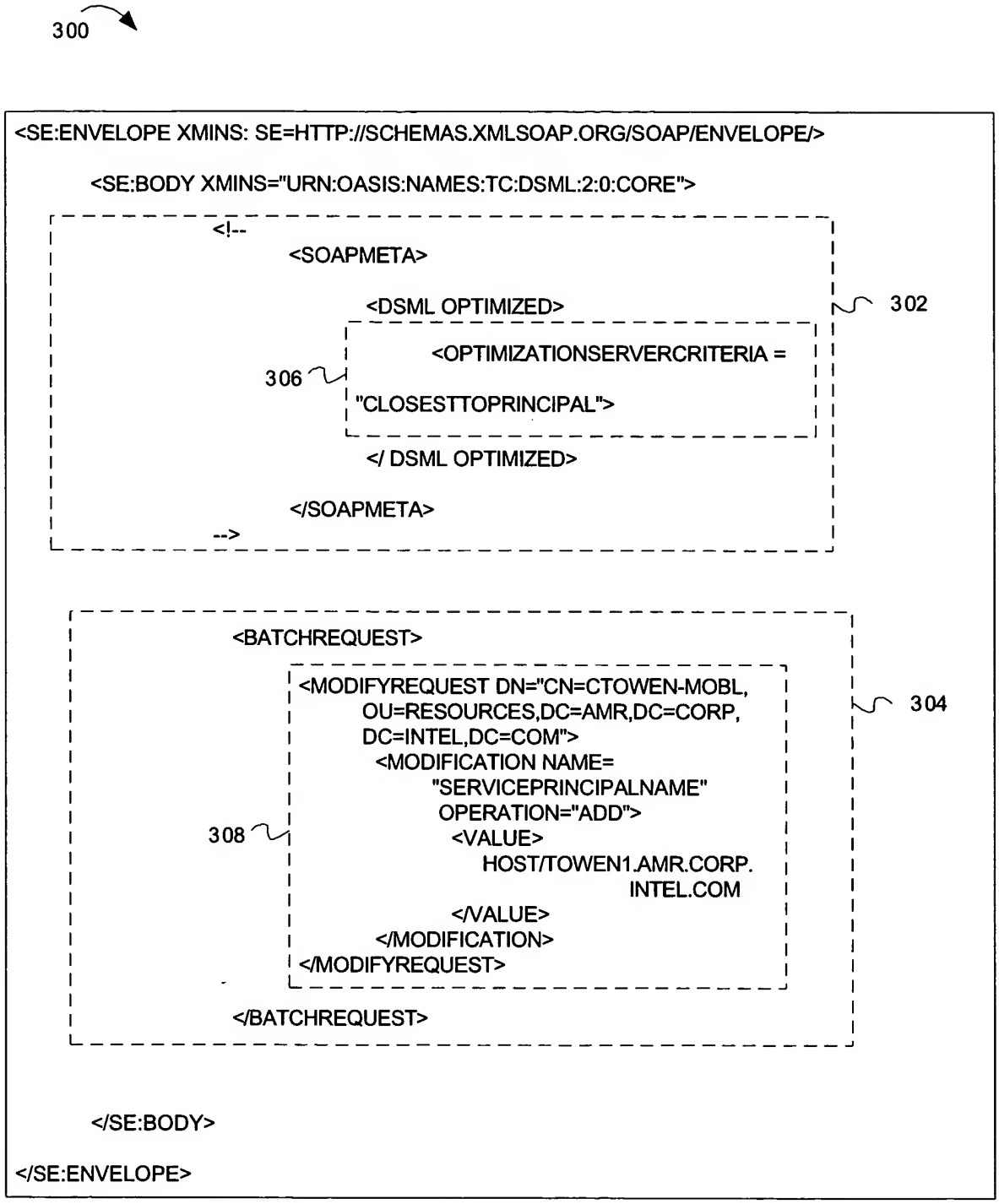
300
<SE:ENVELOPE XMINS: SE=HTTP://SCHEMAS.XMLSOAP.ORG/SOAP/ENVELOPE/>
<SE:BODY XMINS="URN:OASIS:NAMES:TC:DSML:2:0:CORE">
<!--
<SOAPMETA>
<DSML OPTIMIZED>
302
306
<OPTIMIZATIONSERVERCRITERIA =
"CLOSESTTOPRINCIPAL">
</ DSML OPTIMIZED>
</SOAPMETA>
-->
<BATCHREQUEST>
<MODIFYREQUEST DN="CN=CTOWEN-MOBL,
OU=RESOURCES,DC=AMR,DC=CORP,
DC=INTEL,DC=COM">
304
<MODIFICATION NAME=
"SERVICEPRINCIPALNAME"
OPERATION="ADD">
308
<VALUE>
HOST/TOWEN1.AMR.CORP.
INTEL.COM
</VALUE>
</MODIFICATION>
</MODIFYREQUEST>
</BATCHREQUEST>
</SE:BODY>
</SE:ENVELOPE>

FIG. 3

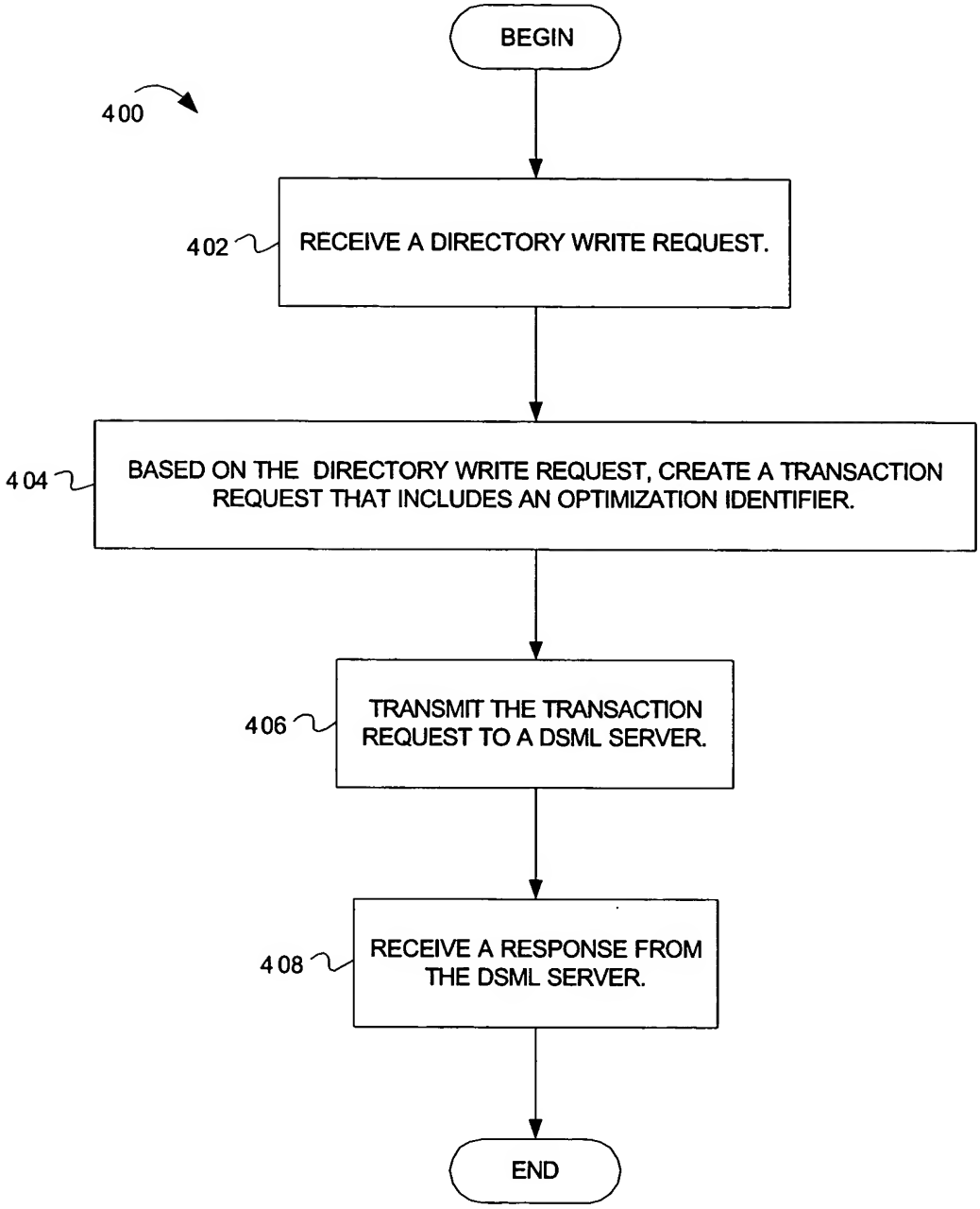
BEGIN
400
402
RECEIVE A DIRECTORY WRITE REQUEST.
404
BASED ON THE DIRECTORY WRITE REQUEST, CREATE A TRANSACTION REQUEST THAT INCLUDES AN OPTIMIZATION IDENTIFIER.
406
TRANSMIT THE TRANSACTION REQUEST TO A DSML SERVER.
408
RECEIVE A RESPONSE FROM THE DSML SERVER.
END

FIG. 4

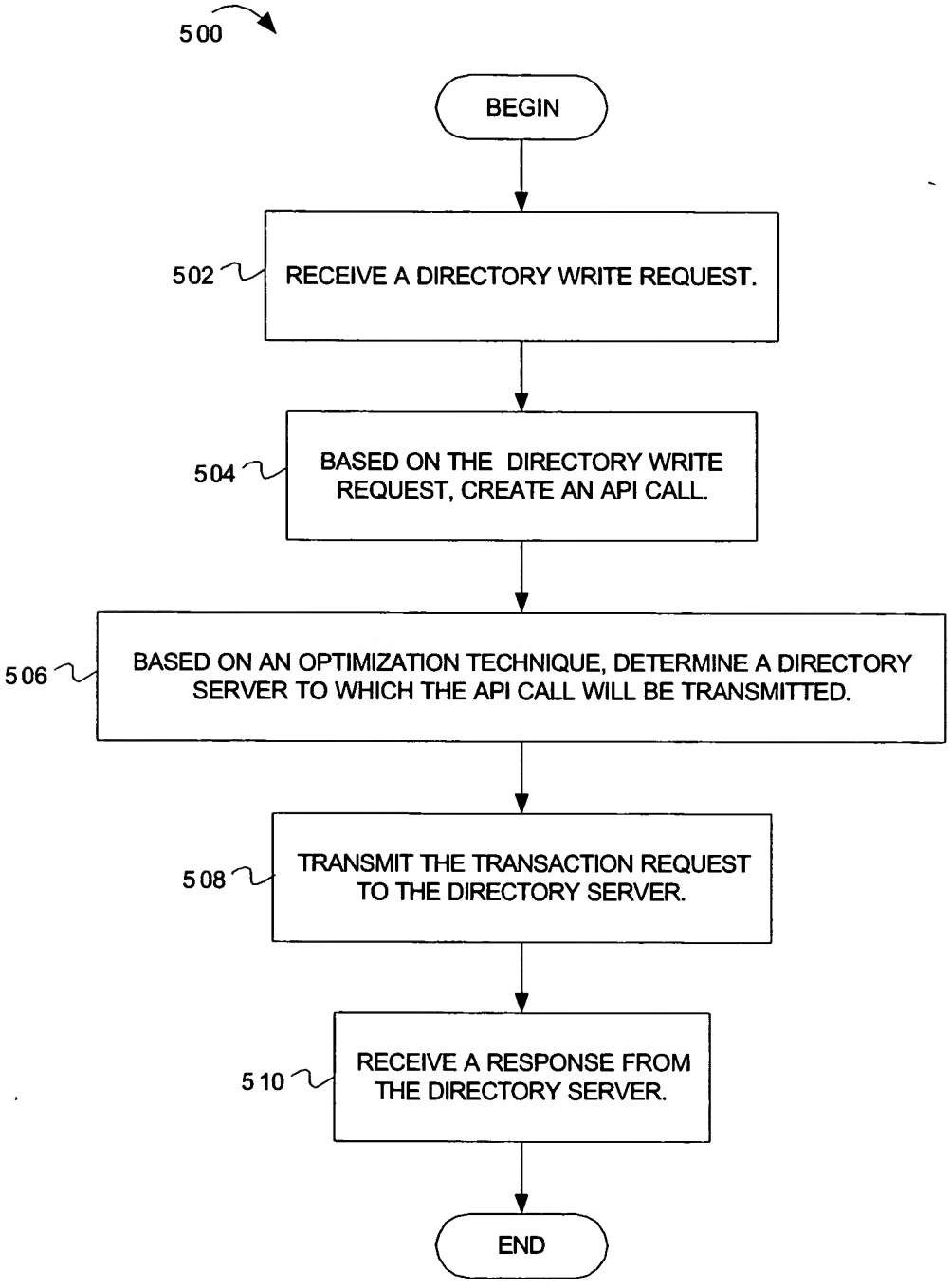
500
BEGIN
502
RECEIVE A DIRECTORY WRITE REQUEST.
504
BASED ON THE DIRECTORY WRITE REQUEST, CREATE AN API CALL.
506
BASED ON AN OPTIMIZATION TECHNIQUE, DETERMINE A DIRECTORY SERVER TO WHICH THE API CALL WILL BE TRANSMITTED.
508
TRANSMIT THE TRANSACTION REQUEST TO THE DIRECTORY SERVER.
510
RECEIVE A RESPONSE FROM THE DIRECTORY SERVER.
END

FIG. 5

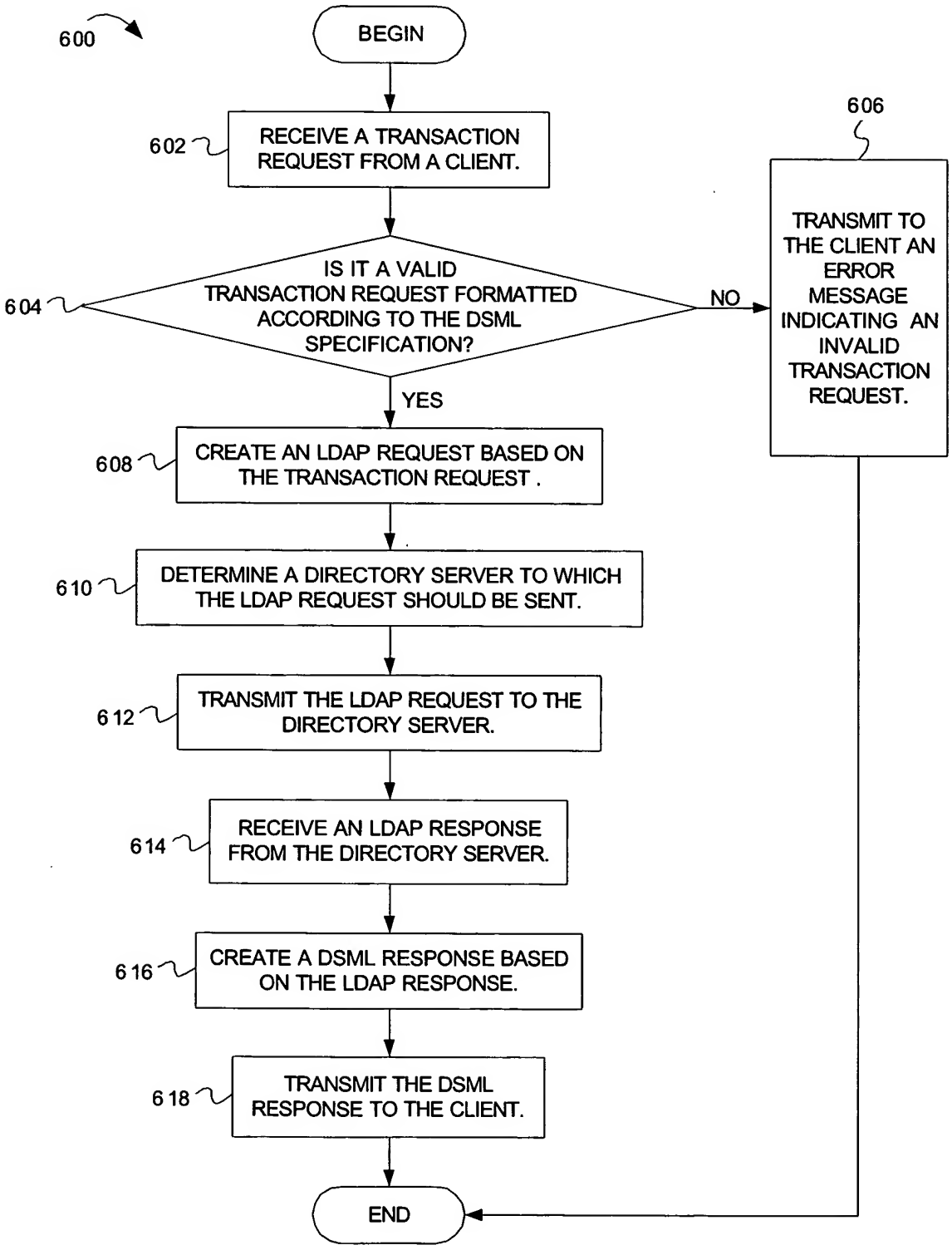
600
BEGIN
602
RECEIVE A TRANSACTION REQUEST FROM A CLIENT.
604
IS IT A VALID TRANSACTION REQUEST FORMATTED ACCORDING TO THE DSML SPECIFICATION?
NO
YES
606
TRANSMIT TO THE CLIENT AN ERROR MESSAGE INDICATING AN INVALID TRANSACTION REQUEST.
608
CREATE AN LDAP REQUEST BASED ON THE TRANSACTION REQUEST .
610
DETERMINE A DIRECTORY SERVER TO WHICH THE LDAP REQUEST SHOULD BE SENT.
612
TRANSMIT THE LDAP REQUEST TO THE DIRECTORY SERVER.
614
RECEIVE AN LDAP RESPONSE FROM THE DIRECTORY SERVER.
616
CREATE A DSML RESPONSE BASED ON THE LDAP RESPONSE.
618
TRANSMIT THE DSML RESPONSE TO THE CLIENT.
END

FIG. 6

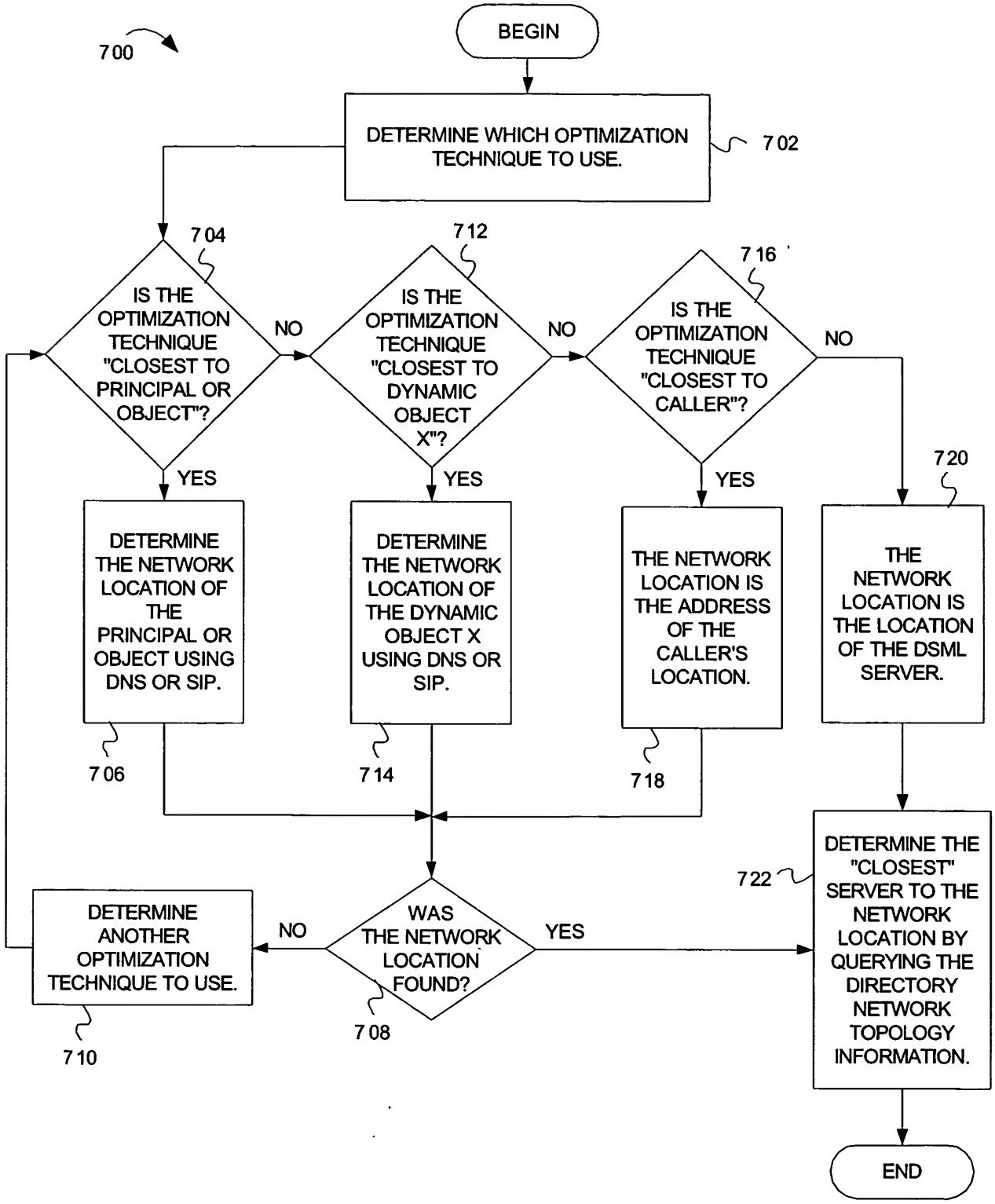
700
BEGIN
DETERMINE WHICH OPTIMIZATION TECHNIQUE TO USE.
702
704
IS THE OPTIMIZATION TECHNIQUE "CLOSEST TO PRINCIPAL OR OBJECT"?
NO
712
IS THE OPTIMIZATION TECHNIQUE "CLOSEST TO DYNAMIC OBJECT X"?
NO
716
IS THE OPTIMIZATION TECHNIQUE "CLOSEST TO CALLER"?
NO
720
YES
DETERMINE THE NETWORK LOCATION OF THE PRINCIPAL OR OBJECT USING DNS OR SIP.
706
YES
DETERMINE THE NETWORK LOCATION OF THE DYNAMIC OBJECT X USING DNS OR SIP.
714
YES
THE NETWORK LOCATION IS THE ADDRESS OF THE CALLER'S LOCATION.
718
THE NETWORK LOCATION IS THE LOCATION OF THE DSML SERVER.
WAS THE NETWORK LOCATION FOUND?
708
NO
DETERMINE ANOTHER OPTIMIZATION TECHNIQUE TO USE.
710
YES
722
DETERMINE THE "CLOSEST" SERVER TO THE NETWORK LOCATION BY QUERYING THE DIRECTORY NETWORK TOPOLOGY INFORMATION.
END

FIG. 7

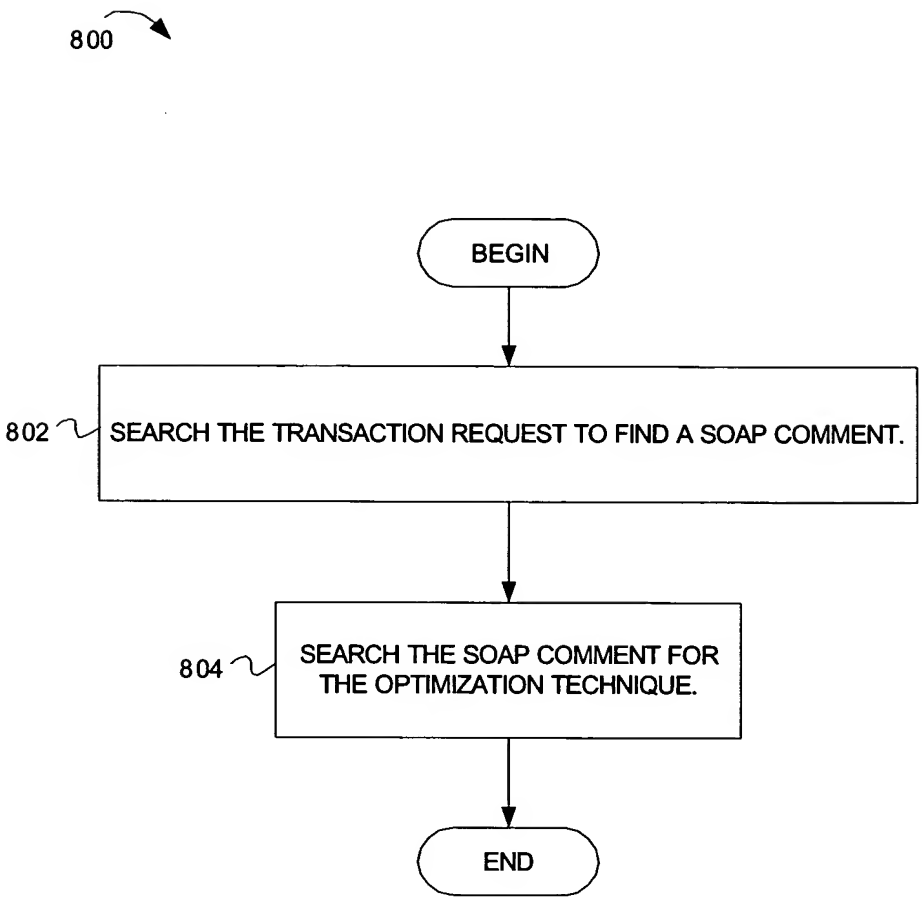
800
BEGIN
802
SEARCH THE TRANSACTION REQUEST TO FIND A SOAP COMMENT.
804
SEARCH THE SOAP COMMENT FOR THE OPTIMIZATION TECHNIQUE.
END

FIG. 8

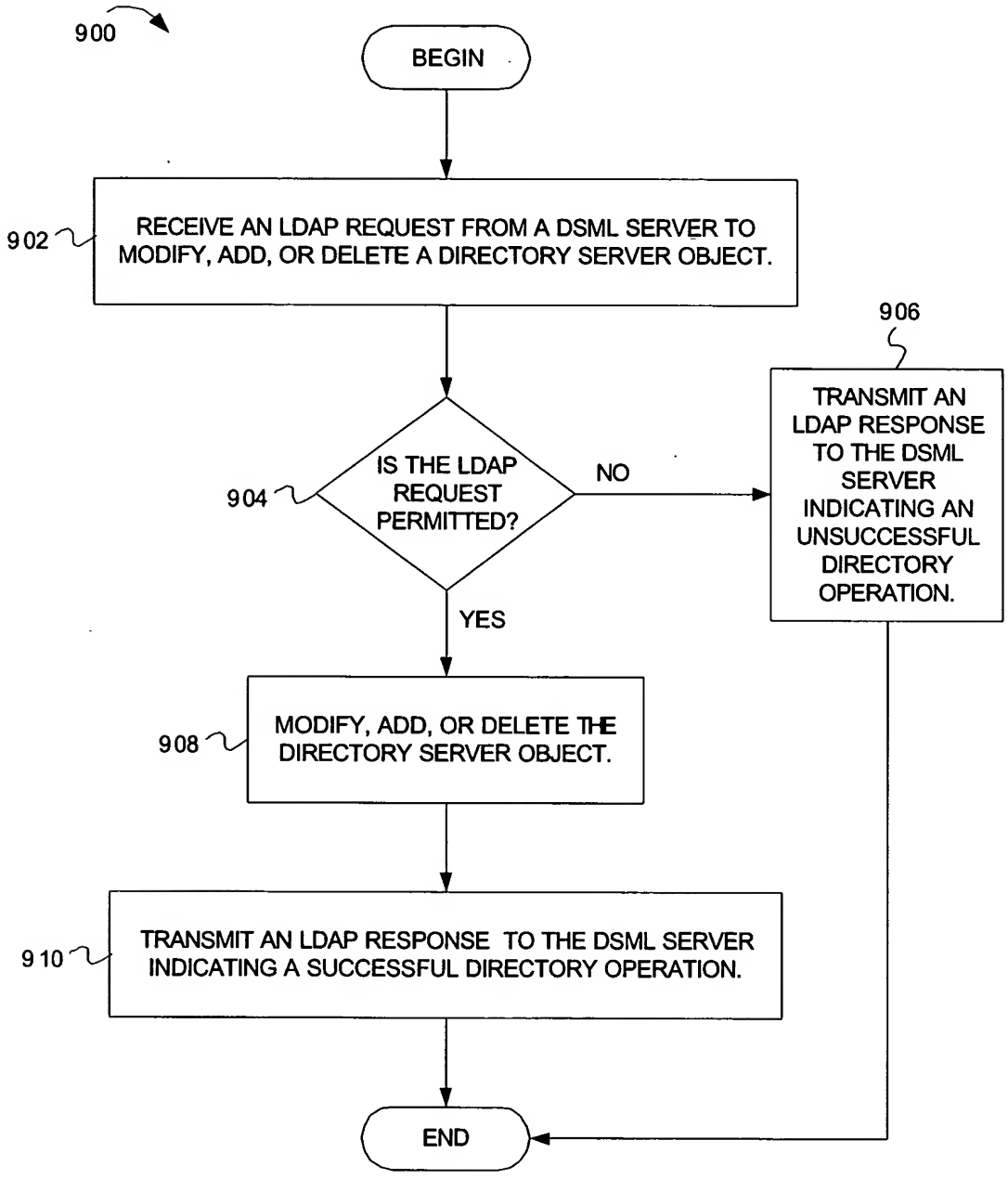
900
BEGIN
902
RECEIVE AN LDAP REQUEST FROM A DSML SERVER TO MODIFY, ADD, OR DELETE A DIRECTORY SERVER OBJECT.
904
IS THE LDAP REQUEST PERMITTED?
NO
906
TRANSMIT AN LDAP RESPONSE TO THE DSML SERVER INDICATING AN UNSUCCESSFUL DIRECTORY OPERATION.
YES
908
MODIFY, ADD, OR DELETE THE DIRECTORY SERVER OBJECT.
910
TRANSMIT AN LDAP RESPONSE TO THE DSML SERVER INDICATING A SUCCESSFUL DIRECTORY OPERATION.
END

FIG. 9